



Industrial Hygiene  
NOV 28 1989

# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

## Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

\*Effective November 11, 1989, the area code will be changed to 708.

## SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCLEAR 7763 FLOCCULANT

DESCRIPTION: An acrylamide/acrylate polymer in a hydrocarbon solvent and water

NFPA 704M/HMIS RATING: 1/1 HEALTH 1/1 FLAMMABILITY 0/0 REACTIVITY 0 OTHER  
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

## SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX. %
Ethoxylated octylphenol	9036-19-5	1-5
Hydrotreated light distillate	64742-47-8	20-40

## SECTION 3 PRECAUTIONARY LABEL INFORMATION

CAUTION: May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

## SECTION 4 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.  
SKIN: Wash thoroughly with soap and rinse with water. Call a physician.  
INGESTION: Do not induce vomiting. Give water. Call a physician.

NOTE TO PHYSICIAN: No specific antidote is known. Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

## SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: Can cause moderate irritation.



# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

*\*Effective November 11, 1989, the area code will be changed to 708.*

## SECTION 5 HEALTH EFFECTS INFORMATION

( CONTINUED )

SKIN CONTACT: Can cause minimal irritation.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned, or identified in Section 6 or 14.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions not previously mentioned, or identified in Section 6 or 14.

## SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have been conducted on this product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): LD<sub>50</sub> = Greater than 5,000 mg/kg

COMMENTS: No significant gross pathologic changes were noted at the time of sacrifice.

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

SKIN IRRITATION INDEX DRAIZE RATING: 1.33/8.0 Slightly irritating

COMMENTS: Slight redness and swelling was noted four to five hours after application. The swelling subsided after 24 hours. The redness remained for 14 days in three of the six animals. The application site appeared dried and cracked after 14 days.

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 26.5/110.0 Moderately irritating

COMMENTS: Slight focal corneal opacity and irritation of the iris and conjunctiva was noted in all six animals one hour after contact. The effects cleared in three of six animals the fourth day after contact and persisted up to seven days in the other three animals.

## SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Cream	FORM: Liquid	ODOR: Slight hydrocarbon
DENSITY:	8.7 lbs/gal.	
SOLUBILITY IN WATER:	Dispersible	
VISCOSITY:	400 cps @ 75 Degrees F	ASTM D-2983
POUR POINT:	-36 Degrees F	ASTM D-97
FLASH POINT:	Greater than 200 Degrees F (PMCC)	ASTM D-93



# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

\*Effective November 11, 1989, the area code will be changed to 708.

## SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

( CONTINUED )

NOTE: These physical properties are typical values for this product.

## SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: Greater than 200 Degrees F (PMCC) ASTM D-93

EXTINGUISHING MEDIA: This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use water to cool containers exposed to fire.

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve NO<sub>x</sub> under fire conditions. If the water is driven off, the remaining organics may be ignitable.

## SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid water contamination which may cause gelling.

Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO<sub>2</sub>, NO<sub>x</sub> may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

## SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: Respiratory protection is not normally needed.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles (ANSI Z 87.1 requirements and selection of gloves, goggles, shoes, etc.) when attaching feeding equipment or doing maintenance.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.



# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

*\*Effective November 11, 1989, the area code will be changed to 708.*

## SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (708-920-1510)

### SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 14.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 14.

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, (i.e. D001 through D017) nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be incinerated in accordance with local, state, and federal regulations.

## SECTION 12 ENVIRONMENTAL INFORMATION

BIOLOGICAL OXYGEN DEMAND (5-day BOD): 296,000 mg/L

CHEMICAL OXYGEN DEMAND: 740,000 mg/L

AQUATIC DATA: Using a 1% aqueous solution

96 hour static acute  $LC_{50}$  to Rainbow Trout = Greater than 1,000 mg/l

48 hour static acute  $LC_{50}$  to Rainbow Trout = Greater than 1,000 mg/l

24 hour static acute  $LC_{50}$  to Rainbow Trout = Greater than 1,000 mg/l

96 hour no observed effect concentration is 125 mg/l based on no mortality or abnormal effects.

TOXICITY RATING: Essentially non-toxic

96 hour static acute  $LC_{50}$  to Sheepshead Minnow = Greater than 1,000 mg/l

48 hour static acute  $LC_{50}$  to Sheepshead Minnow = Greater than 1,000 mg/l

24 hour static acute  $LC_{50}$  to Sheepshead Minnow = Greater than 1,000 mg/l



# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

## Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

\*Effective November 11, 1989, the area code will be changed to 708.

## SECTION 12 ENVIRONMENTAL INFORMATION

( CONTINUED )

96 hour no observed effect concentration is 1,000 mg/l (highest concentration tested) based on no mortality or abnormal effects.

TOXICITY RATING: Essentially non-toxic

96 hour static acute  $LC_{50}$  to Mysid Shrimp = 400 mg/l

48 hour static acute  $LC_{50}$  to Mysid Shrimp = 800 mg/l

24 hour static acute  $LC_{50}$  to Mysid Shrimp = Greater than 1,000 mg/l

95% Confidence Limit of 96 hour  $LC_{50}$  = 320 - 560 mg/l

96 hour no observed effect concentration is 180 mg/l based on no mortality or abnormal effects.

TOXICITY RATING: Slightly toxic

48 hour static acute  $LC_{50}$  to Daphnia = 280 mg/l

24 hour static acute  $LC_{50}$  to Daphnia = Greater than 1,000 mg/l

95% Confidence Limit of 96 hour  $LC_{50}$  = 200 - 410 mg/l

48 hour no observed effect concentration is less than 56 mg/l (lowest concentration tested) based on no mortality or abnormal effects.

TOXICITY RATING: Slightly toxic

If released into the environment, see CERCLA in Section 14.

## SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - PRODUCT IS NOT REGULATED  
DURING TRANSPORTATION

## SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

### FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredients in this product are hazardous and the reasons are shown below.



# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

\*Effective November 11, 1989, the area code will be changed to 708.

## SECTION 14 REGULATORY INFORMATION

( CONTINUED )

Ethoxylated octylphenol - Moderate eye irritant  
Hydrotreated light distillate - Skin/eye irritant

CERCLA, 40 CFR 117, 302:

Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986  
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):

This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS  
(40 CFR 370):

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- XX Immediate (acute) health hazard
- Delayed (chronic) health hazard
- Fire hazard
- Sudden release of pressure hazard
- Reactive hazard

Under Section 311, submittal of MSDS's or a list of product names to the local emergency planning commission, state emergency response commission and local fire department is required after October 17, 1987 if you have:

- 10,000 pounds or more of a hazardous substance, or
- 500 pounds or the threshold planning quantity, whichever is less, of an extremely hazardous substance.

After October 17, 1989, MSDS(s), or a list of product names for all hazardous substances between zero (0) and 10,000 pounds, not previously reported, must be submitted.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):

This product does not contain ingredients (at a level of 1% or greater) on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).



# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

## Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

\*Effective November 11, 1989, the area code will be changed to 708.

## SECTION 14 REGULATORY INFORMATION

( CONTINUED )

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:  
If this product becomes a waste, it does not meet the criteria of a hazardous waste.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):  
None of the ingredients are specifically listed.

CLEAN AIR ACT, 40 CFR 60, Section 111, 40 CFR 61, Section 112:  
This product does not contain ingredients covered by the Clean Air Act.

### STATE REGULATIONS:

#### CALIFORNIA PROPOSITION 65:

None of the chemicals on the current Proposition 65 list are known to be present in this product.

#### MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

### STATE RIGHT TO KNOW LAWS:

This product does not contain ingredients listed by State Right To Know Laws.

### INTERNATIONAL REGULATIONS:

This is a WHMIS controlled product under The House of Commons of Canada Bill C-70. The product contains the following substance(s), from the Ingredient Disclosure List or has been evaluated based on its toxicological properties, to contain the following hazardous ingredient(s):

Chemical Name	CAS #	% Concentration Range
Ethoxylated octylphenol	9036-19-5	1-5
Hydrotreated light distillate	64742-47-8	20-40

## SECTION 15 ADDITIONAL INFORMATION

This product has a specification of 0.05% maximum for residual acrylamide (CAS #79-06-1). We do not believe that this impurity level will present a risk.



# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

\*Effective November 11, 1989, the area code will be changed to 708.

## SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

## SECTION 17 BIBLIOGRAPHY

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services, Public Health Service, PB 33-135855, 1983.

CASARETT AND DOULL'S TOXICOLOGY, THE BASIC SCIENCE OF POISONS, Doull, J., Klaassen, C. D., and Admur, M. O., eds., Macmillian Publishing Company, Inc., N. Y., 2nd edition, 1980.

CHEMICAL HAZARDS OF THE WORKPLACE, Proctor, N. H., and Hughes, J. P., eds., J. P. Lipincott Company, N.Y., 1981.

DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van Nostrand Reinhold Company, N.Y., 6th edition, 1984.

IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO MAN, Geneva: World Health Organization, International Agency for Research on Cancer, 1972-1977.

PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, Clayton, G. D., Clayton, F. E., eds., John Wiley and Sons, N. Y., 3rd edition, Vol. 2 A-C, 1981.

REGISTRY OF TOXIC EFFECTS ON CHEMICAL SUBSTANCES, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, 1983 supplement of 1981-1982 edition, Vol. 1-3, OH, 1984.

Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.





# MATERIAL SAFETY DATA SHEET

PRODUCT NALCLEAR 7763 FLOCCULANT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)\*

\*Effective November 11, 1989, the area code will be changed to 708.

---

SECTION 17 BIBLIOGRAPHY

( CONTINUED )

---

PREPARED BY: John J. Kasper, MSc., Manager Product Safety

DATE CHANGED: 09/06/89

DATE PRINTED: 11/11/89



# MATERIAL SAFETY DATA SHEET

PRODUCT

**Emergency Telephone Number**

**Medical (312) 920-1510 (24 hours)\***

*\*Effective November 11, 1989, the area code will be changed to 708.*